

### **REMARKS/DISCUSSION OF ISSUES**

Claims 1-18 are pending in the application.

Applicant thanks the Examiner for acknowledging the claim for priority and receipt of certified copies of the priority document. Applicant also acknowledges the indication that claims 4-6 define patentable subject matter.

Claims 1-6 and 8 are amended. In particular, claims 2-6 are amended for non-statutory reasons, to replace European-style claim phraseology with American-style claim language, such that the claims are not narrowed in scope and no new matter is added.

New claims 9-18 are added. No new matter is added.

### **OBJECTIONS TO TITLE, ABSTRACT AND SPECIFICATION**

The Examiner objects to the Title, Abstract, and Specification. Applicant hereby amends the Title and submits a new Abstract to address the Examiner's objections.

Applicant thanks the Examiner for providing information about recommended section headings. However, applicants respectfully decline to add the headings. Section headings are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 CFR § 1.51(d) are only guidelines that are suggested for applicant's use. (See Miscellaneous Changes in Patent Practice, Response to comments 17 and 18 (Official Gazette, August 13, 1996) [Docket No: 950620162-6014-02] RIN 0651-AA75 ("Section 1.77 is permissive rather than mandatory. ... [T]he Office will not require any application to comply with the format set forth in 1.77"))).

Regarding the use of the term "different" on-period through the abstract, specification, and claims, Applicant has replaced the Abstract and amended the claims and respectfully submits any possible confusion in the Abstract or claims no longer exists. Applicant also respectfully submits that the term is generally used appropriately through the specification, particularly for example at page 4, lines 17-18 (see also page 5, lines 31-34). Applicants also respectfully submits that the word

“variable” suggested by the Examiner is not accurate, since the on-periods of the subfields are fixed – they are not “varied” in any way – but they are just fixed at different values from each other (see Table 1).

Accordingly, Applicant respectfully request that the Examiner withdraw the objections to the Title, Abstract, Specification and Claims.

**35 U.S.C. § 103**

The Office Action rejects claims 1-3, 7, and 8 under 35 U.S.C. § 103 over McKnight U.S. Patent 5,959,598 (“McKnight”). Applicant respectfully submits that claims 1-3, 7 and 8 are all patentable over McKnight for at least the following reasons.

**Claim 1**

Among other things, the device of claim 1 includes means for receiving n-bit video data for a picture element of the display and for generating, from the n-bit video data, an m-bit digital value for the picture element, where  $m > n$ .

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight. Indeed, such a feature appears contrary to the teaching of McKnight that only should consolidate the number of distinct subfields present to reduce the frame rate (see, e.g., FIGs. 3A-C and the text at col. 8, lines 64 – col. 9, line 54).

Accordingly, for at least this reason, Applicant respectfully submits that claim 1 is patentable over McKnight.

**Claims 2-3 and 7**

Claims 2-3 and 7 all depend from claim 1 and are deemed patentable for at least the reasons set forth above with respect to claim 1.

**Claim 8**

Among other things, the method of claim 8 includes receiving n-bit video data for a picture element of the display, and generating, from the n-bit video data, an m-bit digital value for the picture element, where  $m > n$ .

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight. Indeed, such a feature appears contrary to the teaching of McKnight

that only should consolidate the number of distinct subfields present to reduce the frame rate (see, e.g., FIGs. 3A-C and the text at col. 8, lines 64 – col. 9, line 54).

Accordingly, for at least this reason, Applicant respectfully submits that claim 8 is patentable over McKnight.

### **NEW CLAIMS 9-18**

By this amendment, Applicant adds new claims 9-18. Applicant respectfully submits that each of the claims 9-18 is fully supported by the originally-filed specification and is patentable over the cited art for at least the following reasons.

#### **Claims 9-11**

Claims 9-11 depend from claim 8 and are deemed patentable for at least the reasons set forth above with respect to claim 8, and for the following additional reasons.

#### **Claims 9-10**

Claims 9-10 add features to method claim 8 that are generally similar to the features of claims 5-6 which are indicated by the Examiner to define patentable subject matter over the prior art.

#### **Claim 11**

Among other things, in the method of claim 11, generating the m-bit digital value ( $I_{out}$ ) for the picture element from the n-bit video data ( $I_{in}$ ) includes applying a specified gamma correction function to the video data. An exemplary embodiment of such a feature is disclosed for example at page 6, lines 11-19 of the specification.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claims 9-11 are all patentable over the cited art.

#### **Claims 12-13**

Claims 12-13 depend from claim 1 and are deemed patentable for at least the reasons set forth above with respect to claim 1, and for the following additional

reasons.

Claim 12

Among other things, the device of claim 12 includes a look-up table storing a number corresponding to an on-period for each of the first number of subfields and the second number of subfields. An exemplary embodiment of such a feature is disclosed for example at page 5, lines 10-11, page 6, lines 1-2, and Table 1 of the specification, as elements 65-67 in FIG. 2.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Claim 13

Among other things, in the device of claim 13, the means for generating the m-bit digital value ( $I_{out}$ ) for the picture element from the n-bit video data ( $I_{in}$ ) includes means for applying a specified gamma correction function to the video data. An exemplary embodiment of such a feature is disclosed for example at page 6, lines 11-19 of the specification.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claims 12-13 are all patentable over the cited art.

Claim 14

Among other things, the apparatus of claim 14 includes an image processing unit adapted to receive n-bit video data and to generate therefrom an m-bit value for a picture element of the display, where  $m > n$ .

An exemplary embodiment of such a feature is disclosed at page 4, lines 14-15.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight. Indeed, such a feature appears contrary to the teaching of McKnight that only should consolidate the number of distinct subfields present to reduce the frame rate (see, e.g., FIGs. 3A-C and the text at col. 8, lines 64 – col. 9, line 54).

Accordingly, for at least this reason, Applicant respectfully submits that claim

14 is patentable over McKnight.

Claims 15-18

Claims 15-18 depend from claim 14 and are deemed patentable for at least the reasons set forth above with respect to claim 14, and for the following additional reasons.

Claim 15

Among other things, in the apparatus of claim 15, the means for generating the m-bit digital value ( $I_{out}$ ) for the picture element from the n-bit video data ( $I_{in}$ ) includes means for applying a specified gamma correction function to the video data. An exemplary embodiment of such a feature is disclosed for example at page 6, lines 11-19 of the specification.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Claim 16

Among other things, in the apparatus of claim 16 the second group of subfields comprises n subfields and the first group of subfields comprises (m-n) subfields. An exemplary embodiment of such a feature is disclosed for example at page 4, line 30-page 5, line 4, and page 6, lines 11-19 of the specification.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Claim 17

Among other things, the apparatus of claim 17 includes a latch responsive to both a subfield-on signal and an output-enable signal to control when the picture element emits radiation. An exemplary embodiment of such a feature is disclosed for example at page 5, lines 21-23 of the specification and seen in FIG. 2.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Claim 18

Among other things, in the apparatus of claim 18 the means for generating an output-enable signal for each of the subfields indicating an on-period

of each subfield comprises a look-up table and a period counter for counting the length of the on-period in response to a clock signal. Exemplary embodiments of such features are disclosed for example at page 5, lines 10-16 of the specification.

Applicant respectfully submits that no such feature is disclosed or suggested by McKnight.

Accordingly, for at least these additional reasons, Applicant respectfully submits that claims 14-18 are all patentable over the cited art.

### **CONCLUSION**

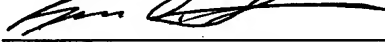
In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claims 1-18 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (703) 715-0870 to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment (except for the issue fee) to Deposit Account No. 50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

VOLENTINE FRANCOS, P.L.L.C.

Date: 1 September 2004

By:   
Kenneth D. Springer  
Registration No. 39,843

VOLENTINE FRANCOS, P.L.L.C.  
One Freedom Square, Suite 1260  
11951 Freedom Drive  
Reston, Virginia 20190  
Telephone No.: (703) 715-0870  
Facsimile No.: (703) 715-0877